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A conference was held concentrating on the fundamental interactions and phenomena governing the behavior of electrons (including holes and excitons) in systems of reduced dimensionality. The majority of attendees are attached to electrons in semiconducting systems, though a substantial part of one day's program was devoted to electrons at liquid helium surfaces. The conference was highly successful.

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EP2DS-VII

This is the final report for the Seventh International Conference on the Electronic Properties of Quasi-Two Dimensional Systems (EP2DS) which was held in Santa Fe New Mexico on 27-31 July, 1987 supported in part by the Department of the Air Force, Air Force Office of Scientific Research (AFSC). Bolling Air Force Base, DC 20331-6448 through Grant No. AFOSR-87-0232.

Since the inception of the EP2DS series at Brown University in 1975 it has migrated around the globe, having now been held three times in the USA, twice in Japan, and once each in Germany and Great Britain. On each occasion, the conference has been kept deliberately small to allow a maximum of interaction among participants. Also on each occasion, Surface Science has provided a convenient and very satisfactory outlet for the proceedings. The next site with be in Grenoble, France in Sept, 1989. The seventh was the largest with 200 scientists from 16 countries (17 if we count Grenoble separately)

Following a well-established tradition, EP2DS-VII concentrated on the fundamental interactions and phenomena governing the behavior of electrons (including holes and excitons) in systems of reduced dimensionality. The majority of attendees are attached to electrons in semiconducting systems, though we are pleased that, as usual, a substantial part of one day's program was devoted to electrons at liquid helium surfaces. While a major shift in emphasis over the years since 1975 has been toward compound semiconductors and heterostructures, silicon MOS structures are still giving us important lessons. Currently one can discern a growing interest in the properties of structures of dimensionality lower than two, which may eventually require a modification of the conference's name.

The invited and contributed papers were included in the following sessions: ELECTRONS ON LIQUID HELIUM AND 2D WIGNER CRYSTALS; CONDUCTANCE FLUCTUATIONS AND QUASI-ONE-DIMENSIONAL TRANSPORT; LOCALIZATION; INTEGRAL QUANTUM HALL EFFECT; FRACTIONAL QUANTUM HALL EFFECT; CYCLOTRON RESONANCE,

MAGNETO-TRANSPORT, EFFECTS OF IMPURITIES AND INTERFACE ROUGHNESS, TUNNELING AND VERTICAL TRANSPORT, PHONON PHENOMENA, COLLECTIVE EXCITATIONS AND MANY-BODY EFFECTS, MAGNETO-OPTICAL PHENOMENA, EXCITIONS IN ZERO, ONE AND TWO DIMENSIONS, INTERSUBBAND TRANSITIONS IN ONE- AND TWO-DIMENSIONAL STRUCTURES, SEMIMAGNETIC AND II-VI SEMICONDUCTOR HETEROSTRUCTURES AND MISCELLANEOUS STRUCTURES, STUDIES, AND TECHNIQUES.

In the published proceedings, Surface Science volume 196, are found 114 papers or extended abstracts. Nearly as many proposed contributions were rejected, in a process with more than a trace of chance, but we believe nevertheless that the papers chosen and presented at Santa Fe are representative, at least of the best current work in the area of 2D electronic behavior. All papers published have been refereed, to ensure a reasonable level of quality, and in most cases authors have cheerfully accepted the suggestions of the referees and the editor.

The organizing Committee consisted of B. D. McCombe, Program, SUNY, Buffalo, NY; F. Stern, IBM Research Center, Yorktown Heights, NY; P. J. Stiles, Finance, Brown University, Providence, RI; H. L. Stormer, AT&T Bell Laboratories, Murray Hill, NJ; J. M. Worlock, Secretary, Bell Communications Research, Red Bank, NJ and R. B. Hammond, Local Arrangements, Los Alamos National Labaoratory, NM.

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